Patent Claims

1. A device (1) for consolidating a fiber composite (V) conveyed continuously along a conveying path (F) by action upon said fiber composite with heat (W) or for cooling, with at least one nozzle arrangement (2a, 2b) on at least one side (3a, 3b) of the conveying path for blowing an, in particular, heated treatment medium (L) in the direction of the conveying path (F) , the at least one nozzle arrangement (2a, 2b) having a plurality of blowing nozzles (4) lying next to one another and arranged at a distance (a) from one another, and an interspace (5) being formed in each case between two adjacent blowing nozzles (4) , characterized in that the interspace (5) between the blowing nozzles (4) is essentially closed or closable with respect to the conveying path (F).

2. A device as claimed in claim 1, characterized in that the interspace (5) between the blowing nozzles (4) is closed in such a way that, between the at least one nozzle arrangement (2a, 2b) and the fiber composite (2) , a pressure space (6) is formed in which an excess pressure (P) can be generated by means of the blowing nozzles (4).

3. A device as claimed in either one of claims 1 and 2, characterized in that the interspace (5) is closed off or closable off in such a way that, in the case of a predetermined fiber composite (4) and in the case of a predetermined outflow velocity (v) and outflow quantity (N) of the treatment medium (L) from the blowing nozzles (4), the treatment medium (L) can be blown through the entire thickness (d) of the fiber composite (V).

4. The device as claimed in one of claims 1 to 3, characterized in that the blowing nozzles (4) have a

blowing orifice (7) which terminates adjacently to the surface (0) of the fiber composite (V).

5. The device as claimed in claim 4, characterized in that the distance (b) between the surface (0) of the fiber composite (V) and the blowing orifice (7) is adjustable.

6. The device as claimed in one of claims 1 to 5, characterized in that the interspaces (5) between the blowing nozzles (4) are closed or closable by means of sealing elements (8) which can be inserted, in particular pushed in, between the blowing nozzles (4).

7. The device as claimed in one of claims 1 to 6, characterized in that the blowing nozzles (4) are designed as wide-slit nozzles which extend essentially over the entire width (B) of the conveying path (F) , and in that the blowing nozzles (4) are provided with a nozzle box (9) having a cross section (Q) which decreases from a connecting orifice (10) , at which treatment medium (L) can be blown into the nozzle box (9) , toward a closed end (11) of the nozzle box (9).

8. The device as claimed in one of claims 1 to 7, characterized in that nozzle arrangements (2a, 2b) are arranged on both sides (3a, 3b) of the conveying path (F).

9. The device as claimed in claim 8, characterized in that a plurality of blowing nozzles (4, 4') are combined into groups (12, 12'), and in that the groups (12, 12') of blowing nozzles (4, 4') are activatable and deactivatable individually.

10. The device as claimed in claim 9, characterized in that the interspace (5) between deactivated blowing nozzles (4', 2b) is opened or openable.

11. The device as claimed in one of claims 1 to 10, characterized in that the device (1) is provided with at least one fan (13) and with at least one heating device (14) which are designed in such a way that 500 to 2000 m^3 of air per hour, with a temperature of 0 to 300% and with a velocity (v) of 0.5 to 70 m per second can be blown against the fiber composite (V) per blowing nozzle (4) and per meter of work width.

12. A method for consolidating a fiber composite (V) by action upon the fiber composite (V) with heat (W), characterized by the steps:
-conveyance of the fiber composite (V) along a conveying path (F)
-blowing of an, in particular, heated treatment medium (L) in the direction of the fiber composite (V) by means of blowing nozzles (4) which are arranged next to one another and which in each case delimit an interspace (5) the interspace (5) being closed off, with the result that an excess pressure (P) is generated in a pressure space (6) continuous to the fiber composite (V) , and the treatment medium (L) being blown through the entire thickness (d) of the fiber composite (V).

13. The method as claimed in claim 12, characterized in that the treatment medium (L) is blown into the fiber composite (V) directly by a blowing orifice (7) of the blowing nozzles (4) which is arranged adjacently to the surface (0) of the fiber composite (V).

14. The method as claimed in claim 13, characterized in that the distance (a) between the blowing orifice (7) of the blowing nozzle (4) and the surface (0) of the fiber composite (V) is set at a predeterminable value.

15. The method as claimed in one of claims 12 to 14, characterized in that, as seen in the conveying direction (R) , the treatment medium (L) is blown against the fiber composite (V) alternately from one side (3a) and from the other side (3b).

16. The method as claimed in claim 15, characterized in that groups (12, 12') of blowing nozzles (4, 4') are activated and deactivated alternately on one side (2a, 2b) of the fiber composite (V), and in that the interspace (5) between deactivating blowing nozzles (4) is opened in order to allow the outflow of the treatment medium (L).

17. The method as claimed in one of claims 12 to 16, characterized in that the treatment medium (in) is blown out of the blowing nozzles (4) at an outflow velocity (1) of 0.5 to 70 m per second, and in that 500 to 2000 m^3 per hour of the treatment medium (L) is blown out per blowing nozzle and per meter of working width.